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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/563,599	01/06/2006	Naohisa Higashiyama	283530US90PCT	3367

22850 7590 08/04/2010  
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, L.L.P.  
1940 DUKE STREET  
ALEXANDRIA, VA 22314

EXAMINER
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ROSATI, BRANDON MICHAEL

ART UNIT	PAPER NUMBER
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3744

NOTIFICATION DATE	DELIVERY MODE
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08/04/2010

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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jgardner@oblon.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/563,599	<b>Applicant(s)</b> HIGASHIYAMA ET AL.	
	<b>Examiner</b> BRANDON M. ROSATI	<b>Art Unit</b> 3744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 04 June 2010.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,4 and 8-31 is/are pending in the application.
- 4a) Of the above claim(s) 16-31 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 4, and 8-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |                                                                                     |                                                                   |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)         | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____                                                         | 6) <input type="checkbox"/> Other: _____                          |

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### DETAILED ACTION

1. This action is in response to the amendment filed on 6/4/2010. Currently, claims 2, 3, and 5-7 have been canceled, 16-31 have been withdrawn, and claims 1, 4, and 8-15 are pending.

#### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 4, 9, 10, and 12-15 are rejected under 35 U.S.C. 102(e) as being anticipated by Jang (U.S. Pub. No. 2003/0221819 A1).

Regarding claim 1, Jang discloses in Figure 1-3 and 5, all the claimed limitations including an inlet outlet tank (10), a refrigerant turn tank (20), a plurality of tube groups (50a, 50b, 50c, 50d), the inlet outlet tank having an inlet header and an outlet header, the turn tank having a uniformalizing member (27), wherein one half of the plate is a dam portion (i.e. no holes) and at least two refrigerant passing holes (28) (Paragraphs [0026]-[0029]).

Regarding claim 4, MPEP 2114 clearly states "While features of an apparatus may be recited either structurally or functionally, claims directed to an apparatus **must be** distinguished from the prior art in terms of structure rather than function. Because claim 4 fails to further limit the apparatus in terms of structure, but rather only recite further functional limitations, the invention as taught by Jang is deemed fully capable of performing such function.

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Regarding claim 9, Jang discloses in Figures 1-3 and 5, all the claimed limitations including an interior dividing plate in the inlet-outlet tank (see Figure 5 top tank).

Regarding claim 10, Jang discloses in Figures 1-3, all the claimed limitations including the partition plate having holes (Figure 5 top tank).

Regarding claim 12, Jang discloses in Figures 1-3, all the claimed limitations including the refrigerant in the inlet-outlet tank provided with an inlet and an outlet (see Figure 3 near 30 and 40).

Regarding claim 13, Jang discloses in Figures 1-3, all the claimed limitations including each group of tubes having at least 7 tubes.

Regarding claim 14, Jang discloses in Figures 1-3, all the structural limitations of the claim. The applicant should be reminded that a recitation with respect to the manner in which a claimed apparatus is intended to be employed (i.e. in a refrigeration cycle) does not differentiate the claimed apparatus from a prior art apparatus satisfying the structural limitations of the claims, as is the case here.

Regarding claim 15, Jang discloses in Figures 1-3, all the structural limitations of the claim. The applicant should be reminded that a recitation with respect to the manner in which a claimed apparatus is intended to be employed (i.e. in a vehicle) does not differentiate the claimed apparatus from a prior art apparatus satisfying the structural limitations of the claims, as is the case here.

***Claim Rejections - 35 USC § 103***

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

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5. Claims 8 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jang (U.S. Pub. No. 2003/0221819 A1) in view of Horiuchi (JP 2003075024 A).

Regarding claims 8 and 11, Jang discloses all the claimed limitations except the turn tank members being made of a specific material (i.e. aluminum) and brazed together as well as the inlet/outlet tank having first and second members being made of aluminum and brazed together. However, Horiuchi disclose in Figures 2-4 and 23, all the structural features of the claim including the turn tank members being made of aluminum and brazed together and the inlet/outlet tank having first and second members being made of aluminum and brazed together (see Specification). Hence, it would have been obvious to one having ordinary skill in the art, at the time the invention was made, to modify the teachings of Jang with the aluminum brazed turn tank of Horiuchi because aluminum is a material which is often utilized in heat exchangers because of its good heat transfer characteristics, thus the efficiency of the device could be increased by utilizing aluminum. Further, brazing is a well known technique in heat exchangers and one of ordinary skill would know to utilize brazing so as to create a fluidly sound unit and reduce the risk of leakage and failure of the device.

### ***Response to Arguments***

6. Applicant's arguments with respect to claims 1, 4, and 8-15 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Jang (U.S. Patent No. 6,732,789 B2) discusses a heat exchanger.

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Lee et al. (U.S. Patent No. 6,745,827 B2) discusses a heat exchanger.

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRANDON M. ROSATI whose telephone number is (571)270-3536. The examiner can normally be reached on Monday-Friday 8:00am- 4:30pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl Tyler or Frantz Jules can be reached on (571) 272-4834 or (571) 272-6681. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

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applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BMR

7/27/2010

/Cheryl J. Tyler/

Supervisory Patent Examiner, Art Unit  
3744